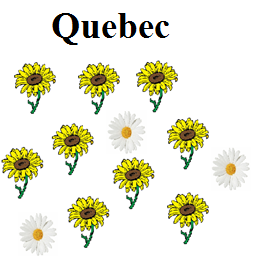
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| --- | --- | --- | --- |
| **A world with no biodiversity, is like a box with only red smarties** | | | |
| NAMES: | | | |
| UNIT: Plants, Anatomy, Growth, and Function  TITLE OF LESSON : Biodiversity (Succession) | | | |
| **BIG IDEAS**:  Plant variety is critical to the survival and sustainability of ecosystems. | | **MATERIALS**:  -gravel (small rocks), moss, grass, weeds, tree twigs  -large chart paper  -markers | |
| **MINISTRY EXPECTATIONS**:  F3.4 and F3.5 | |
| **STUDENT LEARNING GOALS**:  -understand succession’s role in promoting biodiversity  -develop an appreciation for the importance of biodiversity  -identify factors that decrease biodiversity  -identify ways which our society can help promote and maintain biodiversity | | APPENDICES  B1- Geographical location cards taped around classroom  B2- Case study pictures. 1 picture handed per group | |
| PRIOR KNOWLEDGE:  -succession  -colonisers, pioneer species herbaceous species, and complex plants  -ecosystems  -factors that affect plant growth | |
|  | T/L STRATEGIES | RATIONALE | ASSESSMENT |
| A MINDS ON  10 minutes | 1) Building different ecosystems that model different degrees of succession  Each group assigned to a different succession stage and must use rocks, moss, grass, weeds, tree twigs to create an ecosystem that matches their succession stage | -review and assess prior understanding of succession  -remind students of the names associated with the different colonizers at different stages of succession  -links to previous lesson | -Oral presentation made by each group on which succession stage they had to model and identify which species of colonizers used |
| 5 minutes | 1) Ask groups what stage of succession has the highest level of biodiversity | -introduces the concept of biodiversity and shows how it is linked with succession  -allows students to self-check by examining other group’s ecosystems | -Questioning |
| Action  10-15 minutes | 2) Trip around the world  -students will travel in groups to different “ecosystems” (large pictures around the room with geographical name)around the world  -need to rank the geographical locations from least biodiverse to the most biodiverse  **Appendix B1** | -Apply their understanding of biodiversity  -reinforce the concept that high biodiversity is linked with having large number of different types of species and is not population size  -encourages students to practice ability to assess biodiversity levels in different ecosystems | -each group writes down their ranking order on the board to compare with other groups results  -debate any differences |
| 15-20 minutes | Case study: Evaluate the cause and effects leading to low biodiversity  -each group analyzes different picture of ecosystem that has low biodiversity  **Appendix B2** | -allow students to propose causes of low biodiversity  -gives them an opportunity to record the effects of low biodiversity  -allows students to see how everything in ecosystem is interconnected and interdependent | Right angle graphic organizer  Or T-chart with cause and effects |
| C CONSOLID-ATION &  CONNEC-TION  20-25 minutes | -create an infomercial to promote biodiversity | -gives students an opportunity to propose possible solutions to increase biodiversity | -docudrama |
| NEXT STEPS | For homework students must write a small response to case study question: the government has discovered that Canada has really low biodiversity in terms of trees. We only have maple trees. A scientist proposes that the government can solve this problem by buy his cloning machine that can clone trees. Should the government buy this machine and why or why not? | -links biodiversity to plant reproduction |  |

**Appendix**

B1





B2

